treated patients, the generic SF-36 and DFS specific for patients with foot ulcers. Six other instruments were well validated and widely used, but their responsiveness was not documented and their sensitivity to change in RCTs was not consistent across the trials. **CONCLUSIONS:** Though several instruments have been identified, most of the them are specific for a subtype of diabetic population (type 1 or type 2, insulin-treated, patients with complications) and do not meet all criteria in regard to their psychometric properties. Further research is warranted to assess the sensitivity to change of diabetes specific patient reported outcomes instruments.

PDB39

DIABETIC PATIENTS' PREFERENCE FOR INHALED INSULIN

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OBJECTIVE: Assessment of diabetic patients' Willingness To Pay (WTP) for inhaled insulin in relation to injected insulin. **METHODS:** A questionnaire concerning preference and WTP for inhaled insulin was completed by 157 patients (age range, 20–65 years) in Sweden. Type 1 diabetic patients were receiving treatment with insulin (n = 40) and Type 2 patients were receiving treatment with either insulin as single therapy (n = 21), a combination therapy with insulin and anti-diabetic drugs (n = 46), or an oral anti-diabetic treatment with at least 2 oral drugs (n = 50). Patients were asked to assess their WTP for inhaled insulin by choosing from eight comparisons, at different prices. A Conditional Logit model was used to estimate the utility as a function of treatment and price. The WTP measure were the incremental price patients were willing to pay for inhaled insulin compared to injected insulin. **RESULTS:** Patients were willing to pay an additional 400 SEK [50 US dollars] per month (on average) for inhaled insulin in comparison to injected insulin. Type 1 patient reported a lower marginal WTP than Type 2 patients. Type 1 patients were willing to pay an additional 219 SEK. Type 2 patients on insulin as single therapy, or on a combination therapy with insulin and anti-diabetic drugs, or treated with an oral anti-diabetic treatment with at least 2 oral drugs were willing to pay additionally 375 SEK, 381 SEK, 667 SEK, respectively. At equal prices (500 SEK) a total of 129 patients (85%) preferred insulin inhalation. At a large price difference, (300 SEK vs 1400 SEK), only 16% preferred inhalations. However, as many as 27 percent of patients on oral antidiabetic drug treatment still preferred inhaled insulin. **CONCLUSION:** In comparison to injected insulin 85% of patients preferred inhaled insulin at equal prices and patients are on average willing to pay 400 SEK per month.

GI DISORDERS—Clinical Outcomes

PGI1

HEPATITIS B IMMUNISATION FOR NEWBORNS OF HEPATITIS B SURFACE ANTIGEN-POSTITIVE MOTHERS: A COCHRANE HEPATO-BILIARY GROUP SYSTEMATIC REVIEW AND META-ANALYSIS

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OBJECTIVES: To assess the beneficial and harmful effects of hepatitis B active immunisation (vaccines) and passive immunisation (immunoglobulins) in newborns of HBsAg-positive mothers. **METHODS:** By using the Cochrane Collaboration methodology we reviewed all randomised trials to assess the beneficial and harmful effects of hepatitis B active immunisation (vaccines) and passive immunisation (immunoglobulins) for newborns of positive hepatitis B surface antigen (HBsAg) mothers. Trials were identified through the trial registers of The Cochrane Hepato-Biliary Group, The Cochrane Neonatal Group, The Cochrane Library, MEDLINE, EMBASE, authors of trials, and industry until February 2004. **RESULTS:** Compared with placebo/no intervention, hepatitis B immunoglobulins (HBIG) significantly reduced hepatitis B occurrences (RR 0.50, 95% CI 0.41 to 0.60). Compared with vaccination alone, vaccination plus HBIG significantly reduced hepatitis B occurrences (RR 0.54, 95% CI 0.41 to 0.73). HBIG significantly reduced hepatitis B occurrences if administered within 12 hours of birth, but not within 24 or 48 hours of birth. No significant difference on hepatitis B occurrence was found between recombinant vaccine (RV) or plasma-derived vaccine (PDV) (RR 1.00, 95% CI 0.71 to 1.42). No significant differences on hepatitis B occurrences were found between high-dose PDV and low-dose PDV (RR 0.97, 95% CI 0.55 to 1.68) or high-dose RV and low-dose RV (RR 0.78, 95% CI 0.31 to 1.94). Hepatitis B vaccines and HBIG seem generally safe, but few trials reported on adverse events. In general, methodological quality did not significantly influence the results. **CONCLUSIONS:** Hepatitis B vaccination and HBIG within 12 hours of birth significantly reduces hepatitis B occurrences in infants of HBsAg-positive mothers.

PGI2

DOSE-RESPONSE RELATION OF INTERFERON-ALPHA IN PATIENTS WITH HBEAG-POSITIVE CHRONIC HEPATITIS B: META-ANALYSIS AND META-REGRESSION OF RANDOMIZED TRIALS

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OBJECTIVES: To examine dose-response relation of interferon-α in patients with HBeAg positive chronic hepatitis B (CHB) and quantify the effect size of treatment in different regimens. **METHODS:** We searched Medline, SCI-expanded, Current Content Connect, Cochrane Library, and Chinese Biomedical Database to September 2005, and screened references of eligible studies. Randomized trials comparing interferon-α with non-antiviral interventions (placebo/no treatment/standard care) in patients with HBeAg-positive CHB were included. Heterogeneity was examined by the Q statistics and Galbraith plots. Meta-regression was used to analyze the relation of study characteristics to treatment outcomes. Fixed and random effect meta-analysis were used to pooled virological and serological response. When results differed in two models, random effect model was reported. **RESULTS:** Thirty-two trials were included (n = 2164). Dose of interferon-ranged from 1–10 MU, treatment duration ranged from 4–24 weeks, and length of follow-up varied from 12–130 weeks. Loss of HBeAg was responsive to dose (coefficient = 0.156, 95% CI = 0.028–0.28) and duration (coefficient = 0.076, 95%CI = 0.0048–0.15), while other outcomes were not. Stratified analyses showed that high-dose (≥5 MU) and regular duration (16–24 weeks) could effectively clear HBeAg (OR = 3.28, 95% CI = 2.31–4.66; OR = 3.28, 95% CI = 2.16–5.00), and clear HBV DNA (OR = 2.80, 95% CI = 2.03–3.86; OR = 2.58, 95% CI = 1.62–4.12). HBeAg seroconversion could be seen in all-dose groups (OR = 2.02, 95% CI = 1.37–2.97). The number-needed-to-treat for loss of HBeAg was four in high-dose and nine in low-dose treatment. Specifically, a high-dose and regular-duration of interferon-Á was associated with significantly higher loss of HBeAg in Chinese patients (OR = 2.99, 95% CI = 1.53–5.87; OR = 2.56, 95% CI = 1.23–5.33), which otherwise was not effective in clearing HBV DNA. **CON-**

CLUSIONS: Loss of HBeAg is responsive to dose and duration in the treatment with interferon-α. A high-dose (≥5 MU) and regular-duration (16–24 weeks) interferon-α is effective than in clearing virological and serological markers. A dose ≥5 MU and a duration 16–24 week interferon-α is recommended to use.

PGI3

MAJOR GI EVENTS AMONG ELDERLY CHRONIC USERS OF COX-2S AND NON-SELECTIVE NSAIDS, WITH/WITHOUT ASPIRIN

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OBJECTIVES: The gastrointestinal (GI) risks associated with selective cyclooxygenase-2 inhibitors (COX-2s) versus non-selective non-steroidal anti-inflammatory drugs (NSAIDs) among arthritis patients are well documented in clinical trials. This study is to estimate the major GI risks among elderly chronic users of COX-2s versus NSAIDs, with/without aspirin (ASA), in clinical practice. **METHODS:** A cohort study was conducted using secondary data from the GE logician database (Centricity EMR), which contained medical records of 3 million patients seen by 5,000 physicians across 27 states. Inclusion criteria: chronic use (2 or more medication mentions) of COX-2s or NSAIDs within 60 days between 1/1/1999 and 6/30/2003, 65 or older, no switch between COX-2s and NSAIDs during one-year follow-up or before a major GI event, defined as GI hemorrhage including melena (ICD-9 codes: 578.xx). Descriptive and multivariate logistic analyses were conducted to determine how major GI risks differed across chronic users of COX-2s alone, NSAIDs alone, COX-2s + ASA, and NSAIDs + ASA. The logistic analysis controlled for gender, age, pre- or post-index GI-harmful drug use, major and minor GI events in the year prior to index date, and prior GI-protective drug use. **RESULTS:** The number of patients and the percent having major GI events during one-year follow-up period were as follows: COX-2s-alone 7,338 (1.73%); NSAIDs-alone 3,826 (2.06%); COX-2s + ASA 963 (1.77%); and NSAIDs + ASA 602 (2.66%). The multivariate logistic results showed that compared to COX-2s-alone users, NSAIDs-alone and NSAIDs + ASA users had higher major GI risks (OR = 1.35, p = 0.04, 95% CI: 1.01–1.80; and OR = 1.68, p = 0.06, 95% CI: 0.99–2.86 respectively). COX-2s + ASA users had similar risks (OR = 0.96, p = 0.88, 95% CI: 0.57–1.61) to COX-2s-alone users. **CONCLUSIONS:** The major GI risk was highest among elderly chronic users of NSAIDs + ASA, followed by NSAIDs-alone. Only NSAIDs-alone users had a statistically significant higher risk than COX-2s-alone users. The addition of ASA did not significantly increase major GI risk among COX-2 users.

PGI4

COMPARATIVE EFFICACY OF LAMIVUDINE WITH ADEFOVIR IN PATIENTS WITH HBEAG POSITIVE AND NEGATIVE CHRONIC HEPATITIS B: DIRECT AND INDIRECT META-ANALYSIS

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OBJECTIVES: Few trials directly compared lamivudine with adefovir in patients with HBeAg-positive and HBeAg-negative chronic hepatitis B (CHB). This study used direct and indirect comparison methods to compare the relative efficacy of lamivudine to adefovir. **METHODS:** We searched Medline, SCI-expanded, Current Content Connect, Cochrane Library and Chinese Biomedical Database to September 15, 2005, and manually screened the references of included studies. Trials for HBeAg-positive and HBeAg-negative CHB were included if they directly compared lamivudine with adefovir, or compared lamivudine (or adefovir) with placebo/non-treatment. Direct comparison was made by pooling the trials of lamivudine versus adefovir. An adjusted indirect comparison was performed by calculating the difference of pooled estimates of lamivudine and adefovir, which was obtained from trials of lamivudine (or adefovir) versus placebo/no treatment. **RESULTS:** Eight trials (n = 1324) were included. Of these, six were trials for HBeAg-positive CHB patients, and two for HBeAg-negative CHB patients. One trial compared lamivudine with adefovir in lamivudine-resistant patients with HBeAg-positive CHB, and seven trials compared lamivudine (or adefovir) with placebo/non-treatment in naïve patients. Quality was medium-to-high in most trials. The direct comparison for lamivudine-resistant patients showed that lamivudine with adefovir were equivalent in clearing serological markers, lamivudine was less effective in normalizing ALT (OR = 0.11, 95%CI = 0.013–0.97) but superior in histological response (OR = 2.08, 95%CI = 1.08–4.04). Indirect comparison from four trials (n = 915) showed that lamivudine and adefovir were equally effective in serological and biomedical markers in naïve patients with HBeAg-positive CHB. Indirect comparison from two trials (n = 282) showed that lamivudine was more effective in normalization of ALT than adefovir in HBeAg-negative CHB. But no data on serological and histological response were available. **CONCLUSION:** Lamivudine and adefovir was equally effective for naïve patients with HBeAg-positive CHB. Larger direct comparison trials for lamivudine-resistant CHB and HBeAg-negative CHB should be further performed.

GI DISORDERS—Cost Studies

PGI5

COMPARING THE COST-EFFECTIVENESS OF THE INTERFERONS (IFNS) UTILIZED IN THE TREATMENT OF CHRONIC HEPATITIS C VIRUS (HCV): A MODEL EVALUATING THE CLINICAL AND ECONOMIC IMPACT OF CURRENT TREATMENT OPTIONS

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OBJECTIVES: The interferons (IFNs) currently indicated for the treatment of chronic Hepatitis C Virus (HCV) have been shown to exhibit varying responsiveness in terms of achieving a sustained viral response (SVR). It is the objective of this model to be used as tool to compare the relative cost-effectiveness of these agents from a payer perspective. **METHODS:** An interactive Excel-based model was developed to compare the relative cost of treating chronic HCV in terms of both treatment naïve and pegylated-IFN nonresponders. Drug effectiveness with respect to the SVR rate was based on the published literature for therapy in combination with weight-based ribavirin. Drug costs were based on average wholesale price cost with consideration of contractual discounts and patient co-payment. The primary economic endpoint was the drug cost per SVR obtained. Results were displayed for treatment naïve, pegylated-IFN nonresponders, and combined cases respectively. Multi-factor sensitivity analyses were conducted. **RESULTS:** In a typical managed care population, with an estimated prevalence of chronic HCV of 1.4% and with 5% of patients being treated, the drug cost of HCV treatment is $1.22 PMPM. For treatment naïve patients, Genotype I, the cost per SVR obtained is $31,356, $51,152, and $19,113 for Pegasys, Peg-Intron, and consensus interferon (CIFN) respectively. For treatment naïve patients, Genotypes 2/3, the cost per SVR obtained is $18,030, $24,890, and $12,305 for